1	GCGGCCGCGAATTCGGCACCAGGGGCGCTCTCTCCCGGTGTGGGTACTGCTGTCTGT	60
61	GTGGCTGTGGGACCCGTGAGCAAGCAGCGACGCCAGCGGCGGAGAACCGACGAAAGGTGT	120
121	CACCACAGTGATGGCAGTGGACGACAGCACGCTGCAAGTAGTGGTACGGGTGCGGCCCCC++ MetAlaValGluAspSerThrLeuGlnValValArgValArgProPr	180
181	CACCCTCGGGAGCTGGACAGTCAGCGGCGGCCAGTGGTTCAGGTGGTGGACGAGCGGGT+ oThrProArgGluLeuAspSerGlnArgArgProValValGlnValValAspGluArgVa	240
241	GCTGGTGTTTAACCCTGAGGAGCCCGATGGAGGGTTCCCTGGCCTGAAATGGGGTGGCAC+ lLeuValPheAsnProGluGluProAspGlyGlyPheProGlyLeuLysTrpGlyGlyTh	300
301	CCATGATGGCCCCAAGAAGAAGGGCAAAGACCTGACGTTTGTCTTTGACCGGGTCTTTGG+ rHisAspGlyProLysLysGlyLysAspLeuThrPheValPheAspArgValPheGl	360
361	CGAGGCGGCCACCCAACAGGACGTGTTCCAGCACACCACGCACAGCGTCCTGGACAGCTT+ yGluAlaAlaThrGlnGlnAspValPheGlnHisThrThrHisSerValLeuAspSerPh	420
421	CCTCCAGGGCTACAACTGCTCAGTGTTTGCCTACGGGGCCACCGGGGCTGGGAAGACACA+++ eLeuGlnGlyTyrAsnCysSerValPheAlaTyrGlyAlaThrGlyAlaGlyLysThrHi	480
481	CACCATGCTGGGAAGGGAGGGGACCCCGGCATCATGTACCTGACCACCGTGGAACTGTA+ sThrMetLeuGlyArgGluGlyAspProGlyIleMetTyrLeuThrThrValGluLeuTy	520
541	CAGGCGCCTGGAGGCCCGCCAGCAGGAGAAGCACTTCGAGGTGCTCATCAGCTACCAGGA+ rArgArgLeuGluAlaArgGlnGlnGluLvsHisPheGluValLeuIleSerTvrGlnGl	600

601	GGIGIAIAAIGAACAGAICCAIGACCICCIGGAGCCCAAGGGGCCCCIIGCCAICCGCGA					
	uValTyrAsnGluGlnIleHisAspLeuLeuGluProLysGlyProLeuAlaIleArgGl	660				
661	GGACCCCGACAAGGGGTGGTGGTGCAAGGACTTTCTTTCCACCAGCCAG					
001	uAspProAspLysGlyValValValGlnGlyLeuSerPheHisGlnProAlaSerAlaGl					
721	GCAGCTGCTGGAGATACTGACCAGGGGGAACCGTAACCGCACGCA					
	uGlnLeuLeuGluIleLeuThrArgGlyAsnArgAsnArgThrGlnHisProThrAspAl					
781	CAACGCGACTTCCTCCCGCTCCCATGCCATCTTCCAGATCTTTGTGAAGCAGCAGGACCG	840				
701	aAsnAlaThrSerSerArgSerHisAlaIlePheGlnIlePheValLysGlnGlnAspAr					
841	GGTTCCAGGACTGACCCAGGCTGTCCAGGTGGCCAAGATGAGCCTGATTGACCTGGCTGG					
<b>.</b>	gValProGlyLeuThrGlnAlaValGlnValAlaLysMetSerLeuIleAspLeuAlaGl					
901	CTCAGAGCGGCCATCCAGCACCCATGCGAAGGGGGGGGGCCGGCTGCGGGAGGGGGCCAACAT	960				
	ySerGluArgAlaSerSerThrHisAlaLysGlyGluArgLeuArgGluGlyAlaAsnIl	500				
961	CAACCGCTCTCTGCTGGCGCTCATCAACGTCCTCAATGCCTTGGCCGATGCAAAGGGCCG	1020				
	eAsnArgSerLeuLeuAlaLeuIleAsnValLeuAsnAlaLeuAlaAspAlaLysGlyAr	1020				
1021	CAAGACCCATGTGCCCTACCGGGACAGCAAACTGACCCGCCTGCTCAAAGACTCCCTCGG	1080				
	gLysThrHisValProTyrArgAspSerLysLeuThrArgLeuLeuLysAspSerLeuGl					
1081	GGGCAACTGCCGCACAGTGATGATCGCTGCCATCAGCCCTCCAGCCTGACCTACGAGGA	1120				
2001	yGlyAsnCysArgThrValMetIleAlaAlaIleSerProSerSerLeuThrTyrGluAs					
1141	CACGTACAACACCCTCAAATATGCCGACCGG <b>GCC</b> AAGGAGATCAGGCTCTCGCTGAAGAG	1200				
	pThrTyrAsnThrLeuLysTyrAlaAspArg <b>Ala</b> LysGluIleArgLeuSerLeuLysSe					
1201	CAATGTGACCAGCCTGGACTGTCACATCAGCCAGTATGCTACCATCTGCCAACAGCTCCA	1260				
	rAsnValThrSerLeuAsnCvsHisIleSerGlnTvrAlaThrIleCvsGlnGlnLeuGl					

	GCTGAGGTAGCCGCTCTGAGGAAGAAGCTCCAAGTGTATGAGGGGGGAGGCCAGCCCCC	1320
	AlaGluValAlaAlaLeuArgLysLysLeuGlnValTyrGluGlyGlyGlyGlnProPr	1320
	CCACAGGACCTCCCAGGATCTCCCAAGTCGGGACCACCAGAACACCTTCCCAGCTC	1200
	ProGlnAspLeuProGlySerProLysSerGlyProProProGluHisLeuProSerSe	1380
	CCCTTGCCACCCCACCCTCCCAGCCAGCCCTGCACCCCAGAGCTCCCTGCAGGGCCTAG	1 4 4 0
	ProLeuProProHisProProSerGlnProCysThrProGluLeuProAlaGlyProAr	1440
	GCCCTTCAAGAGGAGAGTCTGGGGATGGAGGCCCAGGTGGAGAGGGCCATGGAAGGGAA	1500
	AlaLeuGlnGluGluSerLeuGlyMetGluAlaGlnValGluArgAlaMetGluGlyAs	1500
	TCTTCAGACCAGGAGCAGTCCCCAGAGGATGAGGATGAAGGCCCAGCTGAGGAGGTTCC	15.00
	SerSerAspGlnGluGlnSerProGluAspGluAspGluGlyProAlaGluGluValPr	1560
A	ACCCAGATGCCAGAGCAGAACCCCACACATGCACTGCCAGAGTCCCCTCGCCTGACCCT	1.600
	ThrGlnMetProGluGlnAsnProThrHisAlaLeuProGluSerProArgLeuThrLe	1620
	CAGCCCAAGCCAGTCGTGGGCCACTTCTCAGCACGGGAACTGGATGGGGACCGTTCTAA	1600
	GlnProLysProValValGlyHisPheSerAlaArgGluLeuAspGlyAspArgSerLy	1660
	CAGTTGGCCCTAAAGGTGCTGTGCGTTGCCCAGCGGCAGTACTCCCTGCTCCAAGCAGC	1740
	GlnLeuAlaLeuLysValLeuCysValAlaGlnArgGlnTyrSerLeuLeuGlnAlaAl	1740
C.	AACCTCCTGACGCCCGACATGATCACAGAGTTTGAGACCCTACAGCAGCTGGTGCAAGA	1000
	AsnLeuLeuThrProAspMetIleThrGluPheGluThrLeuGlnGlnLeuValGlnGl	1000
G	GAAAAAATTGAGCCTGGGGCAGAGGCCTTGAGGACTTCAGGCCTGGCCAGGGGGGCACC	1860
	GluLysIleGluProGlyAlaGluAlaLeuArgThrSerGlyLeuAlaArgGlyAlaPr	1000
T(	CTGGCTCAGGAGCTGTGTTCAGAGTCAATCCCTGTGCCGTCTCCTCTCTGCCCAGAGCC	1920
	LeuAlaGlaGluLeuCysSerGluSerTleProValProSerProLeuCysProCluPr	1720

TCCAGGATACACTGGCCCTGTGACCCGGACTATGGCGAGGGGACTGAGTGGCCCCCTGCA	
++++	1980
CACCCTGGGAATCCCGCCTGGACCCAACTGCACCCCAGCCCAGGGGTCCCGATGGCCCAT	2040
sThrLeuGlyIleProProGlyProAsnCysThrProAlaGlnGlySerArgTrpProMe	2040
GGAGAAGAAGAGGAGACCAAGCGCCTTGGAGGCAGACAGTCCCATGGCCTCAAAGCG	2100
tGluLysLysArgArgArgProSerAlaLeuGluAlaAspSerProMetAlaSerLysAr	2100
GGGCACCAAGCGCCAGCCCAGTCCTTCCTGCCCTAAGGAGAGGGTCTCTGCCTGA	2160
gGlyThrLysArgGlnArgGlnSerPheLeuProCysLeuArgArgGlySerLeuProAs	2160
CACCCAACCTTCACAGGGGCCCAGCACCCCCAAAGGAGAAAGGGCCTCCTCCCCTGCCA	2220
pThrGlnProSerGlnGlyProSerThrProLysGlyGluArgAlaSerSerProCysHi	2220
TTCCCCTCGCGTTTGCCCAGCCACAGTCATCAAAAGCCGGGTGCCCCTGGGCCCTTCCGC	2200
sSerProArgValCysProAlaThrValIleLysSerArgValProLeuGlyProSerAl	2280
CATGCAGAACTGCTCCACCCGCTGGCTCTGCCCACTCGAGACCTCAATGCCACCTTTGA	2240
aMetGlnAsnCysSerThrProLeuAlaLeuProThrArgAspLeuAsnAlaThrPheAs	2340
TCTCTCTGAGGAGCCTCCCTCAAAGCCCAGTTTCCATGAATGCATTGGCTGGGACAAAAT	0.400
pLeuSerGluGluProProSerLysProSerPheHisGluCysIleGlyTrpAspLysIl	2400
ACCCCAGGAGCTGAGCAGGCTGGACCAGCCCTTCATCCCCAGGGCACCTGTGCCCCTGTT	2460
eProGlnGluLeuSerArgLeuAspGlnProPheIleProArgAlaProValProLeuPh	2400
CACCATGAAGGGCCCCAAGCCAACATCTTCCCTCCCTGGGACCTCTGCCTGC	2520
eThrMetLysGlyProLysProThrSerSerLeuProGlyThrSerAlaCysLysLysLy	2320
GCGCGTTGCGAGTTCCTCAGTCTCCCATGGCCGCAGCCGCATCGCCCGCC	2580
sArgValAlaSerSerSerValSerHisGlvArgSerArgIleAlaArgLeuProSerSe	2300

CACTTTGAAGAGGCCAGCTGGGCCCCTTGTACTCCCAGAGCTGCCCTTGAGTCCCCTGTG				
rThrLeuLysArgProAlaGlyProLeuValLeuProGluLeuProLeuSerProLeuCy				
CCCTAGCAACCGGAGGAATGGAAAGGACCTCATCAGGGTGGGGAGAGCGCTCTCAGCAGG	2700			
sProSerAsnArgArgAsnGlyLysAspLeuIleArgValGlyArgAlaLeuSerAlaGl GAACGGCGTCACCAAGGTGTCCTGACCGCCAGAATGTCCTGACCACCAAGGTGTCCTAAC	2760			
yAsnGlyValThrLysValSer	2760			
CTACCGGCCCCTCTGCACACACCCCTCTTGGACCTGTAGCCACCTGCACCAGGAGCTGG	2820			
ACCTGCCTTCCTTACCTGGGAGCAATTAGTGCCAACACCCTTTGCTGTATTAACATCCC	2880			
TCCCCAGACATCCATCCTGCTACTCACCCTCTGTTAATCTCCTGTTACACTCAGCTTCTT	2940			
GGCATGTACATATTCATTTGTGAGTGTTAATGTGCTGCTGTTTTTTTGTTTTTTTGGTGGTT	3000			
TTTGTTTTTTTTTTTTTTTGAGATGGAGTCTTACTCTGTCGCCCAGGCTGGAGTG	3060			
CAGTGGTACGATCTTGGCTCACTGCAACCTCCGCCTCCTGGGTTCAAGTAATTCTCCTGC	3120			
CTCAGCTTTCCAAGTAGCTGGGATTACAGGCACCCATCACCACACCCAGCTAATTTTCGT	3180			
CTTTTTAATAGAGAGGGGGTTTTTCCATGTTGGCCAGGCTGGTCTTGAACTCCTGACCTC	3240			
AGGTGATCCGCCTGCCTCAGCTTCCCAAAGTGCTGAGATTACAGGCATGAGCTACCACGC	3300			
CTGGCCCGTGTTGCTGTTTTAAAGGTGCTGCCATGTTCCCCCATCTTTTTTTT	3360			

3361	AIGGAGICICGCICIGICGCCCAGGCIGGAGIGCAGIGGIGGCGAICIIGGCICACIGCA	3420
3421	AGCTCCGCCTCCCAGGTTCACACCATTCTCCTGCCTCAGCCTCCCAAGTAGCTGGGACTA	3480
3481	CAGGCGCCCACCACCACGCCCGGCTAATTTTTTGTATTTTTAGTAGAGATGGGGTTTCAC	3540
3541	CGTGTTAGCCAGGCTGGTCTCGATCTGACCTCATGATCCACCCGCCTCGGCCTCCCAAAG	3600
3601	TGCTGGGATTACAGGCGTGAGCCACTGCGCCCGGCCTCCCCTCTCATTTATGATGCCCTC	3660
3661	TGTGCAGGCAGACGGCTCTTGGGCTCTTTTCCCCACCTGTCTCTAACACAGGCCCCACGG	3720
3721	TGATGGCCACAGGCAGTAGAGGAGGAATGAGGATGGGTTGGGGAGCGGGAGTCGCGGCT	3780
3781	TGGCTCTTCCTGGTTTCTGAGAGGGACATCTTCATCCCTACTCCCCTTGGTCCCCAACCA	3840
3841	CAGTCCTGGTGAAGATGTGGATGATAATGGTGCCTTGATTTCCAAATGAAGACAGCTTTA	3900
3901	TTGCTTAACTCTATTGTACATAGGATACACGTTCAGTGTAAAATAAAGTGTAAAGGGGAA	3960
3961	TTCAGGCTTAATGCTGCACCTAGATATAAATGCTAATGATACTTGGGTTTATAGCCTTCT	4020
4021	GATCCTTTATTTCTGCATATATATATAGATATATACATATATTTTTTGGTATAACAATAAA	4080
4 N O 1	CCGTCTCCATCCTTGGGAAAAAAAAAAAAAAAAAAAAAA	

GACAGCACGC TGCAAGTAGT GGTACGGGTG CGCCCCCA CCCCTCGGGA GCTGGACAGT CAGCGGCGC CAGTGGTTCA GGTGGTGGAC GAGCGGGTGC TGGTGTTTAA CCCTGAGGAG 61 121 CCCGATGGAG GGTTCCCTGG CCTGAAATGG GGTGGCACCC ATGATGGCCC CAAGAAGAAG 181 GGCAAAGACC TGACGTTTGT CTTTGACCGG GTCTTTGGCG AGGCGGCCAC CCAACAGGAC GTGTTCCAGC ACACCACGCA CAGCGTCCTG GACAGCTTCC TCCAGGGCTA CAACTGCTCA 241 301 GTGTTTGCCT ACGGGGCCAC CGGGGCTGGG AAGACACACA CCATGCTGGG AAGGGAGGGG 361 GACCCCGGCA TCATGTACCT GACCACCGTG GAACTGTACA GGCGCCTGGA GGCCCGCCAG 421 CAGGAGAGC ACTTCGAGGT GCTCATCAGC TACCAGGAGG TGTATAATGA ACAGATCCAT 481 GACCTCCTGG AGCCCAAGGG GCCCCTTGCC ATCCGCGAGG ACCCCGACAA GGGGGTGGTG 541 GTGCAAGGAC TTTCTTTCCA CCAGCCAGCC TCAGCCGAGC AGCTGCTGGA GATACTGACC AGGGGGAACC GTAACCGCAC GCAGCACCCC ACTGATGCCA ACGCGACTTC CTCCCGCTCC 601 661 CATGCCATCT TCCAGATCTT TGTGAAGCAG CAGGACCGGG TTCCAGGACT GACCCAGGCT GTCCAGGTGG CCAAGATGAG CCTGATTGAC CTGGCTGGCT CAGAGCGGGC ATCCAGCACC 721 CATGCGAAGG GGGAGCGCT GCGGGAGGGG GCCAACATCA ACCGCTCTCT GCTGGCGCTC 781 ATCAACGTCC TCAATGCCTT GGCCGATGCA AAGGGCCGCA AGACCCATGT GCCCTACCGG 841 901 GACAGCAAAC TGACCCGCCT GCTCAAAGAC TCCCTCGGGG GCAACTGCCG CACAGTGATG 961 ATCGCTGCCA TCAGCCCTC CAGCCTGACC TACGAGGACA CGTACAACAC CCTC

## FIG. 2

<sup>-</sup> 1	DSTLQVVVRV	RPPTPRELDS	QRRPVVQVVD	ERVLVFNPEE	PDGGFPGLKW	GGTHDGPKKK
61	GKDLTFVFDR	VFGEAATQQD	VFQHTTHSVL	DSFLQGYNCS	VFAYGATGAG	KTHTMLGREG
121	DPGIMYLTTV	ELYRRLEARQ	QEKHFEVLIS	YQEVYNEQIH	DLLEPKGPLA	IREDPDKGVV
181	VQGLSFHQPA	SAEQLLEILT	RGNRNRTQHP	TDANATSSRS	HAIFQIFVKQ	QDRVPGLTQA
241	VQVAKMSLID	LAGSERASST	HAKGERLREG	ANINRSLLAL	INVLNALADA	KGRKTHVPYR
301	DSKLTRLLKD	SLGGNCRTVM	IAAISPSSLT	YEDTYNTL		

MAVEDSTLQVVVRVRPPTPRELDSQRRPVVQVVDERVLVFNPEEPDGGFPGLKWGGT
HDGPKKKGKDLTFVFDRVFGEAATQQDVFQHTTHSVLDSFLQGYNCSVFAYGATGAG
KTHTMLGREGDPGIMYLTTVELYRRLEARQQEKHFEVLISYQEVYNEQIHDLLEPKG
PLAIREDPDKGVVVQGLSFHQPASAEQLLEILTRGNRNRTQHPTDANATSSRSHAIF
QIFVKQQDRVPGLTQAVQVAKMSLIDLAGSERASSTHAKGERLREGANINRSLLALI
NVLNALADAKGRKTHVPYRDSKLTRLLKDSLGGNCRTVMIAAISPSSLTYEDTYNTL
KYADRAKEIRLKGNSKLEGKPIPNPLLGLDSTRTGHHHHHH

## FIG. 4

**ATG**GCAGTGGAGGACAGCACGCTGCAAGTAGTGGTACGGGTGCGGCCCCCCACCCCT CGGGAGCTGGACAGTCAGCGGCGCCAGTGGTTCAGGTGGTGGACGAGCGGGTGCTG GTGTTTAACCCTGAGGAGCCCGATGGAGGGTTCCCTGGCCTGAAATGGGGTGGCACC CATGATGGCCCCAAGAAGAGGGCAAAGACCTGACGTTTGTCTTTGACCGGGTCTTT GGCGAGGCGGCCACCAACAGGACGTGTTCCAGCACACCACGCACAGCGTCCTGGAC AGCTTCCTCCAGGGCTACAACTGCTCAGTGTTTGCCTACGGGGCCACCGGGGCTGGG AAGACACACCATGCTGGGAAGGGAGGGGGACCCCGGCATCATGTACCTGACCACC GTGGAACTGTACAGGCGCCTGGAGGCCCGCCAGCAGGAGAAGCACTTCGAGGTGCTC ATCAGCTACCAGGAGGTGTATAATGAACAGATCCATGACCTCCTGGAGCCCAAGGGG CACCAGCCAGCCTCAGCCGAGCAGCTGCTGGAGATACTGACCAGGGGGAACCGTAAC CGCACGCACCCCACTGATGCCAACGCGACTTCCTCCCGCTCCCATGCCATCTTC CAGATCTTTGTGAAGCAGCAGGACCGGGTTCCAGGACTGACCCAGGCTGTCCAGGTG GCCAAGATGAGCCTGATTGACCTGGCTGGCTCAGAGCGGGCATCCAGCACCCATGCG AAGGGGGAGCGCTGCGGGAGGGGCCAACATCAACCGCTCTCTGCTGGCGCTCATC AACGTCCTCAATGCCTTGGCCGATGCAAAGGGCCGCAAGACCCATGTGCCCTACCGG GACAGCAAACTGACCCGCCTGCTCAAAGACTCCCTCGGGGGCAACTGCCGCACAGTG ATGATCGCTGCCATCAGCCCTCCAGCCTGACCTACGAGGACACGTACAACACCCTC AAATATGCCGACCGGGCCAAGGAGATCAGGCTCAAGGGCAATTCGAAGCTTGAAGGT AAGCCTATCCCTAACCCTCTCCTCGGTCTCGATTCTACGCGTACCGGTCATCATCAC CATCACCATTGA

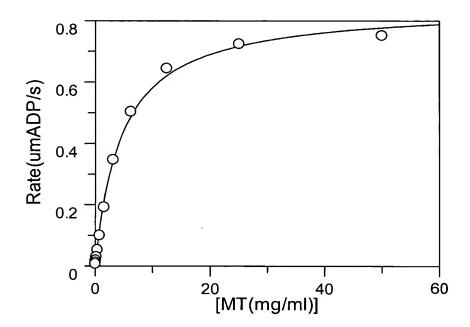


FIG. 6

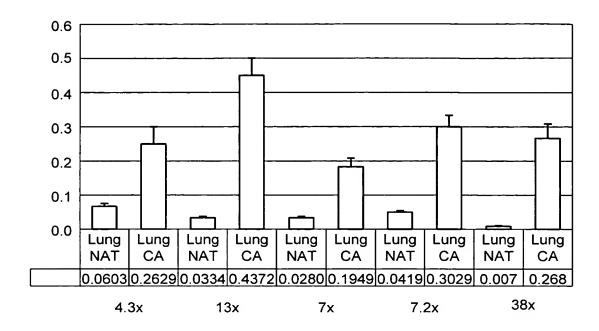


FIG. 7A

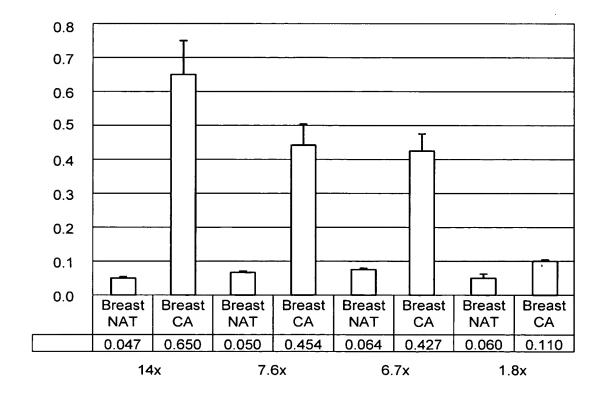


FIG. 7B

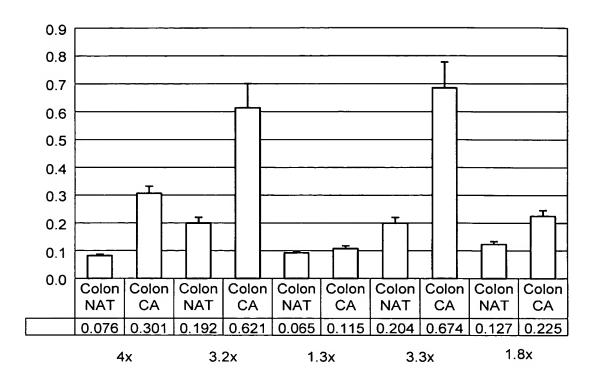


FIG. 7C

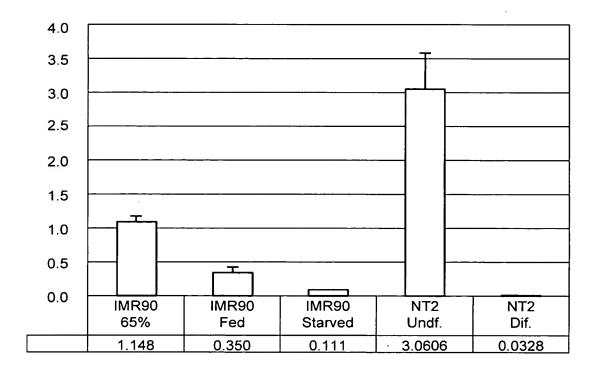


FIG. 7D